

A *B* galactosamine, [or binding to] D-mannose, N-acetylglucosamine or sialic acid, when the lectins bound to an affinity column on which a suitable sugar chain is immobilized.

Claim 10: line 1, change "8" to --21--;

line 2, change "thyroglobulin(s)" to --thyroglobulin--.

Claim 11: line 1, change "10" to --21--;

line 3, change "thyroglobulin(s)" to --thyroglobulin--;

line 4, change "thyroglobulin(s)" to --thyroglobulin--.

Claim 15: line 1, change "8" to --21--;

line 2, change "thyroglobulin(s)" to --thyroglobulin--.

Please add new claims 19-29 as follows:

Subj 2 19. A method for measuring amounts of thyroglobulin in a sample originating from a living body, the sample containing a specific thyroglobulin, which is thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding; other thyroglobulin having a sugar chain other than the specific sugar chain to which said specific lectin or said specific antibody is capable of binding; and other ingredients; the method comprising:

A 2 (a) using an anti-thyroglobulin antibody reactive with both the specific thyroglobulin and the other thyroglobulin having the sugar chain other than the specific sugar chain to which said specific lectin or said specific antibody is capable of binding, contained in the sample, to measure

the total amount of the specific thyroglobulin and the other thyroglobulin based upon the reaction thereof with the anti-thyroglobulin antibody,

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- (b) using said specific lectin or said specific antibody for reacting with the specific thyroglobulin contained in the sample, to measure an amount of the specific thyroglobulin based upon the reaction thereof with said specific lectin or said specific antibody, and
- (c) determining the other thyroglobulin from the difference between (a) and (b).

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20. A method for determining a malignancy of a thyroid tumor, comprising determining the malignancy of the basis of a difference between,

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(a) a total amount of thyroglobulin in a sample originated from a living body, the sample containing a specific thyroglobulin which is thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding; other thyroglobulin having a sugar chain other than the specific sugar chain to which said specific lectin or said specific antibody is capable of binding; and other ingredients, and

(b) an amount of the specific thyroglobulin.

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21. A method for measuring amounts of thyroglobulin in a sample originating from a living body, the sample containing a specific thyroglobulin, which is a thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding; other

thyroglobulin having a sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding; and other ingredients, the steps comprising:

(a)(i) allowing the specific thyroglobulin to react with said specific lectin or said specific antibody, and

(ii) allowing both the specific thyroglobulin and the other thyroglobulin having the sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding, to react with an anti-thyroglobulin antibody reactive with both the specific thyroglobulin and the other thyroglobulin, and

(b)(i) determining an amount of the reaction product of the anti-thyroglobulin antibody with both of the specific thyroglobulin and the other thyroglobulin having the sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding, and

(ii) determining an amount of the reaction product of said specific lectin or said specific antibody with the specific thyroglobulin.

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22. A method for determining malignancy of a thyroid tumor, comprising:

(1) measuring thyroglobulin in a sample originating from a living body, the sample containing a specific thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding; other thyroglobulin having a sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding; and other ingredients; the steps comprising,

(a)(i) allowing the specific thyroglobulin to react with said specific lectin or said specific antibody, and

(ii) allowing both of the specific thyroglobulin and the other thyroglobulin having the sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding, to react with an anti-thyroglobulin antibody reactive with both the specific thyroglobulin and the other thyroglobulin, and

(b)(i) determining an amount of the reaction product of said specific lectin or said specific antibody with the specific thyroglobulin, and

(ii) determining an amount of a reaction product of the anti-thyroglobulin antibody with both of the specific thyroglobulin and the other thyroglobulin having the sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding, and

(2) determining the malignancy of the thyroid tumor based on the amounts obtained in (b)(i) and (b)(ii).

23. A method according to claims 19-22, wherein the lectin is one selected from *Lotus tetragonolobus* agglutinin, *Arachis hypogaea* agglutinin, soybean agglutinin, *Ricinus communis* agglutinin, phytohemagglutinin, Concanavalin A, *Lens culinaris* agglutinin, *Pisum sativum* agglutinin, wheat germ agglutinin, *Datura stramonium* agglutinin and *Limulus polyphemus* agglutinin.

24. A method of determining a malignancy of a thyroid tumor, which comprises:
separating a specific thyroglobulin, which is a thyroglobulin having a specific sugar chain which a specific lectin or a specific antibody is capable of binding, and other thyroglobulin having a sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding by using said specific lectin or said specific antibody,

determining a total amount of the specific thyroglobulin and the other thyroglobulin and an amount of the specific thyroglobulin or the other thyroglobulin on the basis of the separation,

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measuring the proportion of the amount of the specific thyroglobulin or the other thyroglobulin related to the total amount of the specific thyroglobulin and the other thyroglobulin,
and

determining the malignancy of the thyroid tumor on the basis of the measurement.

25. The method according to claim 24, wherein the separation is performed by further using an anti-thyroglobulin reactive with the specific thyroglobulin and the other thyroglobulin.

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26. The method according to claims 19-22 and 24, wherein said specific antibody is one reactive with a Lewis type sugar chain.

27. A reagent for measuring amounts of thyroglobulin in a sample originating from a living body, the sample containing a specific thyroglobulin, which is thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding; other thyroglobulin having a sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding; and other ingredients; the reagent comprising:

(a) an anti-thyroglobulin antibody reactive with both the specific thyroglobulin and the other thyroglobulin having the sugar chain other than said specific sugar chain to which said specific lectin or said specific antibody is capable of binding, contained in the sample, wherein the total amount of the specific thyroglobulin and the other thyroglobulin is determined based upon a reaction thereof with the anti-thyroglobulin antibody,

(b) said lectin or said antibody for reacting with the specific thyroglobulin contained in the sample, wherein an amount of the specific thyroglobulin is determined based upon a reaction thereof with said specific lectin or said specific antibody, whereby an amount of the other thyroglobulin can be measured from the determination difference between (a) and (b).

28. A reagent for determining a malignancy of a thyroid tumor, comprising:

(a) an anti-thyroglobulin antibody reactive with a specific thyroglobulin, which is thyroglobulin having a specific sugar chain to which a specific lectin or a specific antibody is capable of binding and other thyroglobulin having a sugar chain other than one to which said specific

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lectin or said specific antibody is capable of binding, in a sample originated from a living body, for determining a total amount of thyroglobulin, and

(b) said specific lectin or said specific antibody for reacting with the specific thyroglobulin and for determining an amount of the specific thyroglobulin in the sample, whereby the malignancy of a thyroid tumor can be determined on the basis of the total amount of thyroglobulin obtained by using (a) and the amount of the specific thyroglobulin obtained by using (b).

29. The reagent of claims 27-28, wherein said specific antibody is one reactive with a Lewis type sugar chain.

REMARKS

Claims 4, 10-11, 15-16 and new claims 19-29 are pending in this application.

The support for the amendments to claim 4 is found on p.6, line 25 to p.7, line 2.

The support for new claims 19-29 is found in the specification on pages 4-7.

New claims 19-22 are essentially method claims 1 and 8 rewritten for clarity. New claims 24-25 correspond to original claims 17-18 and new claims 27-28 correspond to claims 6 and 7.

Claims 1-18 stand rejected under 35 U.S.C. §112 as being indefinite. The claims have been amended to overcome the rejection.